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VITILIGO ASSOCIATED WITH BREAST CANCER – A REPORT OF TWO CASES

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ABSTRACT

Aim: Aim of this study is to report two cases of generalised vitiligo (GV) who developed cancer (CA) breast.

Case Report: First case is one of CA right breast with history of GV since three years treated with right modified radical mastectomy. Other one is also a case of CA right breast with history of GV since two years treated with neoadjuvant chemotherapy and radiotherapy and followed by right modified radical mastectomy. The second patient developed fresh area of depigmentation at the site of radiotherapy.

Discussion: Even though the association of autoimmune disease (AD) and cancer is well known, there are not much of reports in the literature. The association might be incidental/coincidental or cause & effect relationship. The association might also be cancer (CA) developing in a patient of AD or development of AD in a cancer patient during or after treatment. AD may increase the risk of developing CA or reduce the risk. AD may worsen pre-existing CA or may be a sign of CA regression. Both our cases were known patients of GV who developed CA breast. One of them had developed fresh area of vitiligo after radiotherapy in the post mastectomy site.

Conclusion: Association between AD and CA is well known for a long time. But many aspects of this association with reference to incidence, exact type of association or background of such association whether genetic, environmental or post therapeutic are still not well understood. Our case reports may incite and add up for further studies on these issues..

Key Words: Autoimmune diseases, Generalised vitiligo, Association

INTRODUCTION

Even though the association of autoimmune disease (AD) and cancer is well known, there are not much of reports in the literature. The association might be incidental/coincidental or cause & effect relationship¹. The association might also be cancer (CA) developing in a patient of AD or development of AD in a cancer patient during or after treatment¹⁻⁴. AD may increase the risk of developing CA or reduce the risk; AD may worsen pre-existing CA or may be a sign of CA regression⁵⁻⁸. We are reporting two cases of generalised vitiligo (GV) who developed CA breast.

Case details:

Case 1

A 66 years old female presented to our department with complaints of painless swelling in the right breast of 2 months

duration. She had generalised vitiligo almost all over the body since three years and on examination, a 6 x 4 cm hard irregular lump was detected in the inner upper and lower quadrants of the right breast without any palpable axillary lymphadenopathy and there was no distant metastasis on evaluation. After necessary work up, right modified radical mastectomy was done. Postoperative histopathological examination of the specimen was reported as Grade I Infiltrating Ductal Carcinoma and 1 out of 15 lymph nodes positive for metastasis (p T3 N1). The tumour was positive for estrogen and progesterone receptors and negative for Her 2 neu receptor status. There was no history of vitiligo or any cancers in her family (Figure 1).

Case 2

A 44 year old woman, a known case of generalised vitiligo for 2 years presented with locally advanced breast carcino-

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ma on the right side. After clinical & radiologic evaluation and core biopsy confirmation of the diagnosis of infiltrating ductal carcinoma, she was treated with neoadjuvant chemotherapy and radiotherapy followed by right modified radical mastectomy. Patient developed fresh area of depigmentation at the site of radiotherapy (Figure 2). There was no history of vitiligo or any cancers in her family.

DISCUSSION

Evidence suggests that parts of the immune system may generate anticancer responses, while other parts may promote cancer¹. In a state of perpetual activation, immune mediators such as cytokines, chemokines and free radicals, may cause tissue damage leading to chronic inflammation, and subsequently increase the risk of carcinogenesis; other factors affecting immune activity, such as genetic mutations, environmental exposure, and immunomodulatory treatments, may also bolster a carcinogenic environment²⁻⁷. Vitiligo is one among the diseases generally considered as autoimmune⁸. Generalized vitiligo (GV) is the most common depigmentation disorder, in which acquired multifocal patches of white skin and overlying hair result from loss of melanocytes in the involved areas^{9,10,12}. Vitiligo is a chronic disorder with an estimated worldwide prevalence of 0.5–4%¹¹. The prevalence of vitiligo in India has been speculated to vary from 0.1% to >8.8%¹². Vitiligo is an acquired hypomelanotic disorder characterized by circumscribed depigmented macules in the skin that result from the loss of functional melanocytes. Vitiligo patches can appear anywhere on the skin but common sites are usually around the body orifices, the genitals, or any sun-exposed areas, such as the face and hands¹³. Examples of autoimmune disorders associated with development of lymphomas are rheumatoid arthritis, lupus erythematosus, Sjögren's syndrome, Celiac disease and Hashimoto's thyroiditis¹⁴. There have been several papers published related to cancer other than lymphomas in the ADs including rheumatic diseases, particularly inflammatory arthritis, Sjogren's syndrome, systemic lupus erythematosus, and scleroderma/systemic sclerosis¹⁵. Incidence of pernicious anaemia and carcinoma stomach associated with vitiligo has also been reported earlier¹⁶. The association of GV with malignant melanoma is well documented¹⁷. The association of GV with SCC and BCC has been reported earlier¹⁸⁻²⁰. Besides, actinic keratosis and keratoacanthoma centrifugum marginatum have been documented in vitiligo patients^{21,22}. Fresh depigmented lesions in the radiation portals - Koebner's phenomenon (KP) have however been previously reported in patients with vitiligo who underwent radiation for breast cancer or other cancers²³⁻²⁸. Patients with estrogen receptor - negative breast cancer had a statistically significant better overall survival when they had a history of AD especially among premenopausal patients⁸. Both of our patients were

known case of GV and have developed cancer breast. One of them developed fresh area of vitiligo after radiotherapy in the post mastectomy site.

CONCLUSION

Association between AD and CA is well known for a long time. But many aspects of this association with reference to incidence, exact type of association or background of such association whether genetic, environmental or post therapeutic (chemotherapy, radiotherapy, hormonal or immuno therapy) are still not well understood. Our case reports may incite and add up for further studies on these issues.

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Authors declare that they do not have any conflict of interest.

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Figure 1: Generalised vitiligo in case 1. Postoperative picture



Figure 2: Generalised vitiligo in case 2 with fresh area of depigmentation at the site of radiotherapy.